PART A – COVER PAGE

STATE WATER RESOURCES CONTROL BOARD
SFY 2002 Costa-Machado Water Act of 2000
Chapter 7, Article 2, Nonpoint Source Control Program

Application No. 308

PROJECT TITLE: Water Quality Improvement in Cow Creek Watershed

Project Region	X	Indicate RWQCB #:	5A
Multi-regional Project		Indicate RWQCB #s:	
Statewide Project			

PROJECT DIRECTOR (Ms., Mr., Dr.): Ms. Mary Schroeder — June 3, 2002
(one name only) — PRINT — DATE

LEAD APPLICANT OR ORGANIZATION: Western Shasta Resource Conservation District

TYPE OF AGENCY:

Municipality		Local Agency		*Nonprofit (non-landowner)	
Nonprofit (landowner)		Local Public Agency	X		

STREET ADDRESS: 3294 Bechelli Lane
CITY: Redding — Zip Code: 96002
P.O. BOX: — Zip Code:
COUNTY: Shasta
STATE: California

PHONE NO.: 530.224.3250 FAX NO.: 530.224.3253

E-MAIL ADDRESS: mary@westernshastarcd.org
FEDERAL TAX ID. NO.: 680285373

PROJECT TYPE: R5-13 Project which document existing baseline water quality and establish programs to evaluate long-term water quality trends.

LEGISLATIVE INFORMATION
Senate District 4
Assembly District 2
United States Congressional District 2

RWQCB or SWRCB STAFF CONTACTED REGARDING THIS PROPOSAL:

RWQCB Contact:	Dennis Heiman	SWRCB Contact:	Dennis Heiman
Phone No.:	530.224.4851	Phone No.:	530.224.4851
Dates contacted:	January 9, 2002, May 29, 2002, June 4, 2002	Dates contacted:	January 9, 2002, May 29, 2002, June 4, 2002

COOPERATING ENTITIES:

Entity Name: CA Department of Fish & Game
Role/Contribution to Project: Fisheries Specialist
Contact Person: Mike Berry Phone No.: 530.225.2131
E-mail address: mberry@dfg.ca.gov

Entity Name: US Fish & Wildlife Service
Role/Contribution to Project: Fisheries Specialist
Contact Person: Patricia Parker Phone No.: 530.527.3043
E-mail address: tricia_parker@fws.gov

WATERBODY/WATERSHED (Include Catalog Number in Section 18 of the ARD): 18020118 Upper Cow-Battle

GPS COORDINATES FOR PROJECT LOCATION, IF AVAILABLE: N40.4000, W122.0100

FISCAL SUMMARY:

Proposition 13 Funds Requested	$67,160
Other Project Funds	$18,900
Total Project Budget	$86,060

CERTIFICATION

Please read before signing.

I certify under penalty of perjury that the information I have entered on this application is true and complete to the best of my knowledge and that I am entitled to submit the application on behalf of the applicant (if the applicant is an entity/organization). I further understand that any false, incomplete, or incorrect statements may result in the disqualification of this application. By signing this application, I waive any and all rights to privacy and confidentiality of the proposal on behalf of the applicant, to the extent provided in this RFP.

Applicant Signature Date

Stuart Gray, President, Board of Directors
Printed Name of Applicant

PART B – PROJECT NARRATIVE

The Western Shasta Resource Conservation District, along with the Cow Creek Watershed Management Group, desires to improve water quality conditions in the Cow Creek watershed. This application specifically addresses fecal coliform contamination and excessive temperatures in the tributaries. These problems have been identified through water quality studies by Shasta College, the Department of Water Resources, the Department of Fish and Game, the US Geological Survey, and the Regional Water Quality Control Board, all of which have been described in the Cow Creek Watershed Assessment (WSRCD, November 2001).

The 274,000-acre Cow Creek watershed is a generally uncontrolled tributary to the Sacramento River. It is located in Shasta County on the eastern side of the Sacramento River, downstream of Lake Shasta. The main tributaries in the watershed are: Little Cow, Oak Run, Clover, Old Cow, and South Cow Creeks, which flow in a southwesterly direction and form the main stem of Cow Creek before it enters the Sacramento River.

General land ownership within the watershed is fairly evenly divided between commercial forestland, ranches under the Williamson Act, and other small private landowners. Total private ownership is about 95%. The decline of salmon populations in the Cow Creek watershed is widely documented. Decline is attributed to historic mining, reduced water flows, and increased temperatures due to diversions, and the construction of the Red Bluff diversion dam.

In 1999, WSRCD brought together leaders in the Cow Creek watershed to discuss the formation of a watershed group. The interest was high and soon 60-100 landowners were attending each meeting. A landowner committee was formed to investigate structural options for the group's formation and concluded a 501C3 was most appropriate. A 21-member interim board of directors volunteered and within a few months the Cow Creek Watershed Management Group officially formed a 501C3 non-profit corporation. Today a 15-member board of directors meets monthly and at a minimum, holds community meetings each quarter.

WSRCD applied for and received grants from the State Water Resources Control Board 319 Program and the David and Lucille Packard Foundation to complete a Cow Creek Watershed Assessment. A Technical Advisory Team (TAC) was brought together to work with the watershed group and includes representatives from the Regional Water Quality Control Board, Department of Fish and Game, US Fish and Wildlife Service, California Department of Forestry & Fire Protection, Natural Resources Conservation Service, Shasta County, and Shasta College.

The watershed assessment and implementation plan was completed in November 2001. The results of the assessment and priority projects developed by the TAC include the goals and objectives of this grant application. Additional grants have been obtained by WSRCD for implementation in the Cow Creek watershed. These include fuel reduction plans, funds for a watershed coordinator, education and outreach programs. Activities in the Cow Creek watershed are showcased, along with activities in other watersheds where WSRCD is implementing projects, in a quarterly newsletter, "Watersheds & You," mailed to over 3,500 landowners, agencies and other interested parties. Updates on watershed meetings, workshops and tours are posted on the WSRCD web site, which covers activities in five watersheds.

The Regional Water Quality Control Board (RWQCB) for the Central Valley Region has adopted a Basin Plan for the Central Valley Region, which includes both numeric and qualitative water quality standards and objectives, based on beneficial uses. The beneficial uses for Cow Creek include municipal and domestic supply, irrigation, stock watering, power generation, contact and non-contact recreation, warm and cold water habitat, spawning habitat for warm and cold water

fisheries, migration for anadromous fisheries, wildlife habitat and navigation. It has been determined that when the Basin Plan is revised during the next biannual review, the RWQCB has stated that the lower reaches of Cow Creek may be listed as impaired for exceeding fecal coliform and temperature. For this reason, in discussion with our RWQCB contact, this grant application was modified to expand the focus and solely concentrate on the fecal coliform and temperature problems in the watershed. The proposals to inventory the creeks for channel scour and noxious weeds in the riparian areas was eliminated and the budget adjusted accordingly.

This application for identifying the source(s) of fecal coliform in the watershed and options to remedy the problem(s), as well as monitoring water temperature in various locations and determination of the capacity within the watershed to lower the temperatures to improve anadromous fish habitat, along with an ongoing monitoring program to implement adaptive management The projects support the CALFED Watershed Program goals and objectives of restoration, enhancement, monitoring and education programs. The projects will facilitate and improve collaboration among government agencies and the local watershed group; conduct a monitoring program based on sound science and include a wide-range of participants in the decision-making process for enhancing watershed health; disseminate the information throughout the watershed, the local, regional, and state groups. This project supports the CALFED goals 3.3.1 Improved Coordination and Assistance, 3.3.2 Development of Monitoring Protocols and Application of Adaptive Management Processes, 3.3.3 Improved and Expanded Watershed Education and Public Outreach, 3.3.4 Maximization of the Multiple Benefits of the Common Programs, and 3.3.5 Improved Watershed Stewardship.

Fecal Coliform

Fecal coliform in surface water is a direct result of solid waste from mammals and can be a result of septic tank effluent leaking to water courses, or livestock, wildlife or human defecation. The RWQCB Basin Plan Water Quality Objective for fecal coliform in waters used for contact recreation is no more than 200 mpn/100ml, based on a minimum of five samples in a 30-day period, with no more than 10% of the total number of samples collected during a 30-day period exceeding 400 mpn/100ml (RWQCB, 1998).

Data on coliform concentrations are limited to a study by Shasta College (Hannaford, 2000) and the RWQCB 1996, 2001 and 2002. The Shasta College studied nine sites from June 1999 to October 1999. The Colilert ® -18 test from IDEXX Laboratories, Inc. was used for testing. Among the nine sites sampled throughout the study, three sites had consistently high fecal coliform concentrations. These are the lower elevation reaches of Clover Creek, and the middle elevation reaches of South Cow and Oak Run Creeks. The other six sites were consistently low in fecal coliform concentration, well within the recreational contact standards. The contaminated sites had fecal coliform levels exceeding 200 mpn/100ml and reached 1600 mpn/100ml. The 1996 RWQCB study found levels exceeding 1600 mpn/100ml. The source of fecal coliform is unknown, and may be attributed to livestock waste, leaking septic systems, or other sources. If it is assumed the study sites with low coliform levels (less than 50 mpn in most cases) represent at least the wildlife input, this may represent a background level of fecal coliform, therefore the high fecal coliform levels measured probably originate from livestock or human sources.

In this project, detailed surveys and tests will determine the source of fecal coliform bacteria and identify possible pollution reduction actions in Oak Run Creek, Clover Creek and South Cow Creek.

Temperature

Temperature is a primary limiting factor for aquatic biota (Allen, 1995). Excessive temperatures can induce high metabolic rates and oxygen debt stress in fish and invertebrates. Temperature concerns in the Cow Creek watershed are focused primarily on the effects to the anadromous fishery, predominately Chinook salmon and steelhead. Adult Chinook salmon have exhibited poor survival when held at temperatures above 60 degrees F, and produce eggs less viable then when held at lower temperatures (DWR, 1988), Salmon are considered to be stenotherms because they can only tolerate a narrow range of temperatures. Lethal temperature threshold for juvenile and adult salmon is approximately 25 degrees C (77 degrees F).

AGENCY	TRIBUTARY	YEARS	TESTED FOR
DWR			
	Oak Run	1977-1982	Temperature
	Little Cow	1952-1982	Temperature
	Clover	1952, 1977-1982,	Temperature
		1992	Temperature
	Old Cow	1977-1982	Temperature
	South Cow	1959	Temperature
	Main Stem	1955-1984	Temperature
		1960-1983	Temperature
		1979-1982	Temperature
		1974-1990	Temperature
DFG			
	Little Cow	1992 1977-1982	Temperature
	Old Cow	1992	Temperature
	South Cow	1992	Temperature
USGS			
	Oak Run	1957-1968	Temperature
	Little Cow	1957-1965	Temperature
	South Cow	1956-1968	Temperature
	Main Stem	1955-1979	Temperature
SHN Consulting			
	Little Cow	1998-1999	Temperature
Shasta College			
	Oak Run	1999-2000	Temperature & Fecal Coliform
	Little Cow	1999-2000	Temperature & Fecal Coliform
	Clover	1999-2000	Temperature & Fecal Coliform
	Old Cow	1999-2000	Temperature & Fecal Coliform
	South Cow	1999-2000	Temperature & Fecal Coliform
	Main Stem	1999-2000	Temperature & Fecal Coliform
Roseburg Resources			
	Old Cow	1996-1998	Temperature
	South Cow	1996-1998	Temperature

Temperature in Little Cow Creek

The California Department of Water Resources has collected temperature data from approximately three stations within the Little Cow Creek Watershed. The data from 1952 through 1965 indicate the temperature in Little Cow Creek near Ingot (elevation 1,200'), exceeded 25 degrees C several times during the summer months with a maximum temperature of 27.8 degrees C in June 1977. Shasta College collected data from two stations on Little Cow Creek from 1999-2000 for a limited watershed assessment. The study indicated that during the summer months the maximum temperature in Little Cow Creek near Ingot in the middle reach was 24.6 degrees C, and the average temperature was 20.5 degrees C. In the lower reach of Little Cow Creek near Bella Vista (elevation 600') the stream temperature exceeded 25 degrees C numerous times with the maximum temperature of 29.9 degrees C, and the average temperature of 25.5 degrees C.

Temperature in Oak Run Creek

The California Department of Water Resources has collected temperature data from two stations within the Oak Run Creek watershed, near Oak Run and Millville. A review of the data from 1977 through 1982 indicates that the temperature in Oak Run Creek near Oak Run (elevation 1,440') exceeded 25 degrees C several times during the summer months, with a maximum temperature of 26.1 degrees C in June 1977. The Millville station (elevation 480') exceeded 25 degrees C several times in the summer months with a maximum temperature of 31.7 degrees C in June 1978.

Temperature in Clover Creek

The California Department of Water Resources has collected temperature data from two stations within the Clover Creek watershed, mid-elevation near Fern Road (elevation 2,680') and Millville. A review of the data from 1977 through 1982 indicates that the temperature in Clover Creek near Fern Road did not exceed 25 degrees C several times during the summer months, with a maximum temperature of 22.7 degrees C in June 1977. The Millville station (elevation 480') exceeded 25 degrees C several times in the summer months with a maximum temperature of 33.3 degrees C in June 1977.

Shasta College data collected from these two stations showed the stream temperatures in the lower reach of Clover Creek (elevation less than 500') exceeded 25 degrees C numerous times with a daily mean temperature of 24.8 degrees C and a maximum temperature of 28.0 degrees C.

Temperature in Old Cow Creek

The California Department of Water Resources has collected temperature data from one station within the Old Cow Creek watershed, mid-elevation near the Kilarc Powerhouse (elevation 2,600'). A review of the data from 1977 through 1982 indicates that the temperature in Old Cow Creek exceeded 25 degrees C once during the summer months, with a maximum temperature of 26.1 degrees C in June 1977.

Temperature in South Cow Creek

The California Department of Water Resources has collected temperature data from two stations within the South Cow Creek watershed, mid-elevation near Whitmore (elevation 2,600') and the South Cow Creek DWR station near Millville (elevation 480'). A review of the data from 1977 through 1982 indicates that the temperature in South Cow Creek near Whitmore did not exceed 25 degrees C during the summer months, while the maximum temperature near Millville was 26.1 degrees C in August 1959.

Temperature in the Main Stem of Cow Creek

The California Department of Water Resources has collected temperature data from five stations within the main stem of Cow Creek: Millville, Palo Cedro, Little Cow and Anderson (elevations less than 500'). The studies concluded the water temperature in the main stem of Cow Creek exceeds preferred developmental thresholds for Chinook salmon approximately six months each year (roughly May-October). Maximum peak temperatures frequently exceed lethal thresholds for juvenile and adult fish in summer months. The upstream tributary input can account for the bulk of this warm water during the hot summer months. The main stem is dominated by Old Cow and South Cow Creeks throughout the summer, so temperatures are actually mediated; upstream average and maximum temperature in Little Cow and Oak Run Creeks exceeded those for the main stem downstream.

In this grant application, we propose adding additional temperature data to that already available and model it to answer two questions:

1) Given the temperatures identified and the life history requirements of anadromous fish, to what extent does temperature limit fish populations?
2) Could temperature regimes be modified by instream enhancement and direct restoration actions in the watershed?

This work will be contracted out to a qualified water quality/fisheries consultant through a bidding process. A Quality Assurance Project Plan (QAPP) will be developed, as well as a monitoring plan, approved by the RWQCB and CALFED. WSRCD and the Cow Creek Technical Advisory Team will prepare the bid document. WSRCD will implement the bidding process, manage the grant, facilitate meetings, coordinate the work, complete quarterly reports.

In April 2001, WSRCD entered into a Sponsor Agreement with the Shasta Cascade Operation District of the California Conservation Corps, and has since used the CCC in various watershed restoration projects. On this project, WSRCD, the consultant, and Rick Vela of the CCC will work together to identify what aspect of the project will be accomplished by the CCC.

PART C – PROPOSED SCOPE OF WORK

1. BACKGROUND AND GOALS

Fecal coliform

Fecal coliform in three of the five main tributaries and high temperatures in the lower elevations of the watershed have been repeatedly identified as limiting factors for threatened anadromous fish, predominately Chinook salmon and steelhead. This has been documented in the *Preliminary Water Quality Assessment of Cow Creek Tributaries*, published by Shasta College in May 2000, the *Cow Creek Watershed Assessment*, published by the Western Shasta Resource Conservation District (WSRCD) in November 2001, and in the Regional Water Quality Control Board's water quality surveys in 1996, 2001 and 2002.

Fecal coliform has been widely used as an indicator for the presence of harmful pathogens. Although coliform is a natural element of aquatic food chains, when found in surface water, it is a direct result of solid waste from mammals, septic tank effluent leaking into water sources, or livestock, wildlife or human defecation. Fecal coliform concentrations in water used for contact recreation should be no more than 200 mpn/100ml, based on a minimum of five samples in a 30-day period (Basin Plan Water Quality Objective). No more than 10 percent of the total number of samples collected during a 30-day period should exceed 400 mpn/100ml (RWQCB, 1998). In the Shasta College study, three of the nine sites sampled had consistently high fecal coliform concentrations in the range of 200+ to 1600 mpn. The other six sites were less than 50 mpn in most cases. The actual source of fecal coliform is unknown at this time. The Shasta College study recommends surveys to identify the specific sources of fecal coliform and tests to identify possible pollution reduction actions.

The goals of this project are to:

- identify the cause or sources of the fecal coliform problems; and
- recommend remedial alternatives to the fecal coliform problems

The fecal coliform testing will be done in the three tributaries with known problems, as well as the main stem of Cow Creek, in the spring, summer and fall of 2004 on a monthly basis using the EPA SW846 water sampling procedure. Testing will begin with sites at 3-mile intervals, then narrowing the distance until the source is located. The Technical Advisory Team will review the results and, with the assistance of the RWQCB, develop remediation recommendations. The results will support the implementation of restoration activities in the Cow Creek Watershed.

Temperature

High temperatures in lower elevations are stressful to cold water fish species, particularly Chinook salmon and steelhead. Based on the temperature records for Cow Creek (continuous from 1995-2000, with tests in 2001 and 2002), the water temperature in the main stem of Cow Creek exceeds preferred developmental thresholds for Chinook salmon approximately 6 months At this time there is no documentation that shows what the potential temperature ranges are in the Cow Creek tributaries at lower elevations. With the temperatures identified to date and the life history requirements of anadromous fish, the goals of the project are to:

- survey the five main tributaries in the watershed to create statistically accurate baseline temperature data and determine why temperatures are elevated;

- create a model for determining potential actions that could significantly lower the temperature;
- determine what extent does temperature in this watershed limit fish; and
- identify how high temperatures may be changed given the current climate and water volume, or if temperature regimes can be modified by instream enhancement or direct restoration actions.

The temperature testing will evaluate peak data and, through additional testing, narrow down the sources, determine causes, and the feasibility of projects to help lower temperature in priority areas for use by anadromous fish. The results will support the implementation of restoration activities in the Cow Creek Watershed.

Capacity

The Western Shasta Resource Conservation District (WSRCD) has seven local volunteer directors, who assume leadership positions in providing direction to their community's natural resource programs. The District has a staff of twelve who are currently implementing over 30 grants totaling $5,018,593, of which several are multi-year grants. The annual budget is over $1.2 million per year. Technical support is available from collaborators on this project, who will be invited to participate on a Technical Advisory Committee. This includes the Regional Water Quality Control Board, U.S. Fish & Wildlife Service, California Department of Fish & Game, Shasta College, California Department of Water Resources, USDA-Natural Resources Conservation Service, Cow Creek Watershed Management Group, and the Shasta-Tehama Bioregional Council. The project will be a success as measured by identification of the sources of fecal coliform and remedial actions, completing the temperature model with recommendations.

In April 2001, WSRCD entered into a Sponsor Agreement with the Shasta Cascade Operation District of the California Conservation Corps, and has since used the CCC in various watershed restoration projects. On this project, WSRCD and the consultant will work with the CCC to determine what activities are best accomplished by the CCC.

WSRCD has completed other Watershed Assessments and Watershed Management Plans, which have proven to be a valuable resource for watershed information. These include the Lower Clear Creek Watershed Analysis (January 1996), Lower Clear Creek Watershed Management Plan (September 1998), Upper Clear Creek Watershed Analysis (April 1999), and the Cow Creek Watershed Assessment (November 2001).

Communication and Outreach

WSRCD has worked with landowners and stakeholders in the formation of the Cow Creek Watershed Management Group, which has been recently classified as a 501(c)3. With grant funds, the RCD has continued to mail newsletters to all property owners and interested parties in the Cow Creek Watershed on a quarterly basis. Monthly board meetings are noticed and all community meetings are included in the newsletters and on the RCD web site.

Meeting Priorities

CALFED Priorities: The goals of this project support the goals of the CALFED Watershed Program Goals to 1) improve and increase aquatic habitats and improve ecological functions to support sustainable populations of diverse and valuable plant and animal species by reducing or

eliminating factors that degrade habitat, impair ecological functions and reduce population size and/or health of species, and 2) provide good water quality for all beneficial uses. This project supports the primary objectives of CALFED, to: 1) facilitate and improve coordination, collaboration, and assistance among government agencies, other organizations, and local watershed groups, 2) develop watershed monitoring and assessment protocols, 3) support education and outreach, and 4) implement a strategy that will ensure support and long-term sustainability of local watershed activities.

CALFED Water Quality Program – supporting community-based watershed efforts to reduce non-point sources of contaminants. This requires data to determine the source of contaminants of concern to the watershed. This project also supports the CALFED Watershed Program Plan Primary Objective of providing good water quality for all beneficial uses.

SWRCB/RWQCB priorities**:** R5-13 – Project which document existing baseline water quality and establish programs to evaluate long-term water quality trends. The State Water Resources Control Board and the Regional Water Quality Control Board have adopted a Water Quality Control Plan (Basin Plan) per California Water Code (Section 13240). The Basin Plan is a regionally specific plan that identifies the "beneficial uses" of water bodies and sets numeric criteria to protect the beneficial uses identified. The beneficial uses identified for Cow Creek include: "Municipal and domestic supply, irrigation, stock watering, power generation, contact recreation, canoeing and rafting, non-contact recreation and aesthetic, cold water habitat, spawning habitat for cold and warm water fisheries, migration for anadromous fisheries, wildlife habitat and navigation."

2. PROPOSED WORK TO BE PERFORMED (Start with Task 4.)

Task 4 - Advisory Committee
A Technical Advisory Committee (TAC) will be formed to provide overall direction for the investigative and evaluative phases of this project. At the completion of the investigative phase of the project the TAC will evaluate the results and develop an implementation plan and schedule.

4.1 Recruit representatives from the Central Valley Regional Water Quality Control Board, California Department of Fish and Game, U.S. Fish and Wildlife Service, University of California Cooperative Extension, U.S. Natural Resources Conservation Service, Shasta College, the Cow Creek Watershed Group and other representatives from public agencies as agreed upon.

Task Deliverables: 4.1 List of TAC members

Task 5 - Water Quality Sampling
Contract with a qualified consulting firm to confirm the location and sources of fecal coliform contamination and recommend solutions. obtain any landowner access agreements.

5.1 Contract with a qualified consultant to prepare the fecal coliform report with recommendations.

5.2 TAC reviews the report and prepares implementation plan.

Task deliverables: 5.1 Copy of bid document and contract with consultant, 5.2 TAC report and plan.

Task 6 Temperature Project
Contract with a qualified consulting firm to confirm the severity of temperature problems in the lower watershed, determine if there are opportunities for solutions.

5.1 Contract with a qualified consultant to prepare the temperature report with recommendations.

5.2 TAC reviews the report and prepares implementation plan, if feasible.

Task deliverables: 5.1 Copy of bid document and contract with consultant, 5.2 TAC report and plan.

Task 7 Suggested Implementation Plan and Checklist
The TAC, following the recommendations of the consultant, will prepare a Suggested Implementation Plan and Checklist for this project.

7.1 TAC completes Suggested Implementation Plan and Checklist

Task deliverables: 7.1 Suggested Implementation Plan and Checklist

Task 8 Draft and Final Reports

A Draft Report will be completed and made available to the TAC, the Cow Creek Watershed Management Group, and the community as a whole for comments. A Final Report will be prepared after review of all comments.

Task deliverables: Draft Report and Final Report.

3. TARGET COMPLETION DATES

Task No. Deliverables	Target Completion Dates
Task 1: Project Administration	
1.1 Quarterly/Monthly Progress Reports	10th of every January, April, July, October
1.2 Subcontractor Documentation	November 30, 2003
1.3 Expenditure/Invoice Projections	Monthly
1.4 Project Survey Form	April 30, 2006
Task 2: CEQA/NEPA Documents and Permits, if applicable	
2.1 CEQA/NEPA Documentation	December 31, 2003
2.2 Permits	March 30, 2004
Task 3: Quality Assurance Project Plan, if applicable	
3.1 Completion and approval of QAPP	December 31, 2003
Task 4: Technical Advisory Committee	
4.1 Formation of TAC	August 31, 2003
Task 5: Fecal Coliform Project	
5.1 Prepare fecal coliform report	December 31, 2005
5.2 TAC review of report	January 31, 2006
Task 6: Temperature Project	
6.1 Prepare temperature report	December 31, 2005
6.2 TAC Review of report	January 31, 2006
Task 7: Suggested Implementation Plan and Checklist	
7.1 Suggested Implementation Plan	March 31, 2006
7.2 Implementation Checklist	April 30, 2006
Task 8: Draft and Final Reports	
#.1 Draft Report	February 28, 2006
#.2 Final Report	May 30, 2006

PART D1 - BUDGET SUMMARY SHEET – TASK BUDGET BREAKDOWN

	Prop 13 Share	Match Amount	Total Budget
1. Task 1 – Project Administration	$9,400	$18,900	$28,300
2. Task 2 – CEQA/NEPA Documents and Permits	1,000		1,000
3. Task 3 – Quality Assurance Project Plan	2,000		2,000
4. Task 4 – Technical Advisory Committee	3,000		3,000
5. Task 5 – Fecal Coliform Testing	12,000		12,000
6. Task 6 – Temperature Testing	26,000		26,000
7. Task 7 – Implementation Plan	2,000		2,000
8. Task 8 -- Draft and Final Reports	3,000		3,000
Subtotal	58,400	18,900	77,300
Overhead 15%	8,760		8,760
TOTAL BUDGET	67,160		86,060

PART D2 - BUDGET SUMMARY SHEET – LINE ITEM Budget

	Prop 13 Share	Match Amount	Total Budget
1. Personnel Services	$11,500	$18,900	$30,400
2. Operating Expenses	8,900		8,900
3. Property Acquisitions			
a. Equipment			
b. Furniture			
c. Portable assets			
d. Electronic data software/hardware			
e. Processing equipment			
f. Miscellaneous			
4. Professional and Consultant Services	38,000		38,000
5. Contract Laboratory Services			
6. Construction Expenses			
Subtotal	58,400		77,300
7. General Overhead	8,760		8,760
8. TOTAL BUDGET	67,160	18,900	86,060

9. Percent of Match Share in dollars = 22%

10. Describe the source and nature of the matching funds.
Shasta College instructors and students $5,000
Cow Creek Watershed Management Group $8,900
WSRCD Management $5,000

PART E – Map (single 2-sided 81/2" x 11")

Part F – Environmental Information Form

NEPA/CEQA

1. Will this project require compliance with CEQA, NEPA, or both? Yes_X____No_____

2. If you checked "no" to question 1, please explain why compliance is not required for the actions in this proposal.

3. If the project will require CEQA and/or NEPA compliance, identify the lead agency(ies).

CEQA Lead Agency	Western Shasta Resource Conservation District
NEPA Lead Agency	Western Shasta Resource Conservation District

4. Please check which type of document will be prepared.

CEQA		**NEPA**	
Categorical Exemption	X	Categorical Exclusion	X
Initial Study		Environmental Assessment/FONSI	
Environmental Impact Report		Environment Impact Statement	

Fish and Wildlife Service Manual at 516 DM 6 Appendix 1.4 Categorical Exclusions Section B Resources Management: (1) Research, inventory, and information collection activities directly related to the conservation of fish and wildlife resources.

5. If the CEQA/NEPA process is not complete, please describe the estimated timelines and cost for the process and the expected date of completion.
   Expect the environmental documentation will be completed within three months after signing the grant contract.

6. If the CEQA/NEPA document has been completed:

   What is the name of the document?_____

   Please attach a copy of the CEQA/NEPA document cover page to the application.

7. Environmental Permitting and Approvals

Please indicate what permits or other approvals may be required for the activities contained in your proposal and which have already been obtained. Please check all that apply.

LOCAL PERMITS AND APPROVALS	Needed?	Obtained?
Conditional use permit	No	
Variance	No	
Subdivision Map Act	No	
Grading permit	No	
General plan or Local Coastal Program amendment	No	
Specific plan approval	No	
Rezone	No	
Williamson Act Contract cancellation	No	
Local Coastal Development Permit	No	
Other	No	
STATE PERMITS AND APPROVALS	Needed?	Obtained?
Scientific collecting permit	No	
CESA compliance: 2081	No	
CESA compliance: NCCP	No	
1601/03	No	
CWA 401 certification	No	
Coastal development permit	No	
Reclamation Board approval	No	
Notification of DPC or BCDC	No	

Other	None	
FEDERAL PERMITS AND APPROVALS	Needed?	Obtained?
ESA compliance Section 7 consultation	No	
ESA compliance Section 10 permit	No	
Rivers and Harbors Act	No	
CWA 404	No	
Other	None	
PERMISSION TO ACCESS PROPERTY		
Permission to access city, county or other local agency land. If "yes," indicate the name of the agency:_____	No	
Permission to access State land. If "yes," indicate the name of the agency: _____	No	
Permission to access federal land. If "yes," indicate the name of the agency: _____	No	
Permission to access private land. If "yes," indicate the name of the agency: Willing landowners participating in the project	Yes	

PART G - LAND USE QUESTIONNAIRE

1. Do the actions in the proposal involve construction or physical changes in the land use?
   Yes____ No____

If you answered "yes" to # 1, describe what actions will occur on the land involved in the proposal.

If you answered "no" to # 1, explain what type of actions are involved in the proposal (i.e., research only, planning only).

This is a research and data collection project only.

2. How many acres of land will be subject to a land use change under the proposal? _-0-_____

3. What is the current land use of the area subject to a land use change under the proposal? What is the current zoning and general plan designation(s) for the property? Does the current land use involve agricultural production?

a) Current land use _____
b) Current zoning _____
c) Current general plan designation _____
d) Does current use involve agricultural production? Yes____ No____

4. Is the land subject to a land use change in the proposal currently under a Williamson Act contract?
   Yes____ No _____

5. What is the proposed land use of the area subject to a land use change under the proposal?

6. Will the applicant acquire any land under the proposal, either in fee (purchase) or through a conservation easement? Yes_____ No__X___

a) If you answered "yes" to 6, describe the number of acres that will be acquired and whether the acquisition will be of fee title or a conservation easement:
b) Total number of acres to be acquired under proposal _____
c) Number of acres to be acquired in fee _____
d) Number of acres to be subject to conservation easement _____

7. For all lands subject to a land use change under the proposal, describe what entity or organization will manage the property and provide operations and maintenance services.

8. Will the applicant require access across public or private property that the applicant does not own to accomplish the activities in the proposal? Yes__X___ No_____

9. For land acquisitions (fee title or easements), will existing water rights be acquired? Yes_____ No___X__

10. Does the applicant propose any modifications to the water right or change in the delivery of the water?
    Yes_____ No___X_

    If "yes" to 10, please describe the modifications or changes.

PART H – SUPPORTING RELEVANT DOCUMENTS

LANDOWNER NOTIFICATION

Since this project covers the entire Cow Creek watershed, per the requirements the following is being done:

- A letter has been prepared for the 200 largest landowners about this grant proposal. A copy of the letter is Attachment #1. A list of landowners is on file by parcel number and the 200 largest will receive the letter
- A newspaper ad announcing the grant application has been prepared to run in the East Valley Times for 3 weeks. This newspaper covers this watershed and is highly popular with the residents. A copy of the ad is Attachment #2.

LETTERS OF SUPPORT

Letters of Support have been received from the following:

Cow Creek Watershed CRMP Group

Letters of Support have been requested from the following (sample letter is Attachment #3):

Pit River Tribal Council
Shasta County Board of Supervisors
Shasta Tehama Bioregional Council
California Department of Fish & Game
U.S. Fish & Wildlife Service
U.S. Natural Resources Conservation Service

REFERENCE DOCUMENTS

Attachment 4: Cover from *Cow Creek Watershed Assessment,* 2001
Attachment 5: Front page of *Preliminary Water Quality Assessment of Cow Creek Tributaries*, 2000.
Attachment 6: Map of the Average Summer Water Temperatures, taken from the *Preliminary Water Quality Assessment of Cow Creek Tributaries*, 2000.
Attachment 7: Map of the Average Fecal Coliform Concentration, taken from the *Preliminary Water Quality Assessment of Cow Creek Tributaries*, 2000.